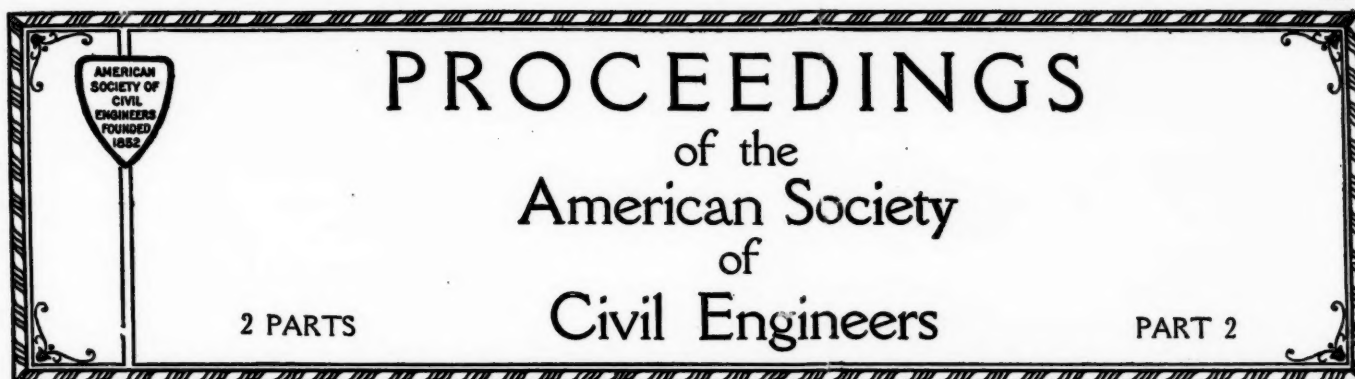


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## A Problem and An Opinion

**R**ECENTLY a request by a member for advice was submitted to the Society's Committee on Charges and Methods of Making Charges for Professional Services. Without meeting as a whole, four members of the Committee submitted opinions in writing, which may be condensed as follows:

### THE PROBLEM

An engineer was retained as consultant by an architect. The consultant was to design and to supervise (in general only) the construction of a 15-story office and fraternal building. The building was to have a steel frame and rest on a timber pile and concrete foundation. It was also to have a very elaborate lighting system. These were the features for which the engineer's services were desired.

Preliminary agreement as to fee was only that it was to be on the "usual basis", with details to be agreed upon later. No definite agreement was ever reached except that "a percentage (not stated) was agreed upon to apply to the framework and foundation".

When the plans for the foundation and frame were practically completed, it was decided to add three stories to a portion of the structure. Estimates were prepared on the new basis. Another set of plans for the foundation and framework, to the extent of about two-thirds of the structure, was designed. The building was built.

A.—It is now contended that no compensation is due the engineer consultant for the re-design other than the "agreed percentage applied to the cost of the frame as built",

i.e., that the increased tonnage in the taller building provides a basis for a fee sufficiently increased to compensate for the work involved in the re-design.

B.—It is also contended that as the architect maintained a superintendent on the job he thereby performed a part of the work expected of the consultant engineer (in general supervision) and that a fee of 1% of the cost of the foundation should be

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## Local Section and Student Chapter Co-Operation?

**F**ROM Dr. Jeffcott, Secretary of the Institution of Civil Engineers, there has come a letter telling of the response which has resulted from the notice in May Proceedings about "Engineering Abstracts".

He suggests a little closer observance of the conditions under which the Abstracts may be obtained, and although he does not mention it specifically, perhaps reference is to the provision that payment must be made in advance. That is a requirement that every one who gives thought to it will recognize as reasonable.

The suggestion has been made that each Local Section subscribe, in the name of its Secretary, to "Engineering Abstracts", and that the volume be circulated as much as practicable. It has also been suggested that each Local Section might see that the Faculty Sponsors or the incoming presidents of the near-by Student Chapters are given subscriptions for the benefit of the students.

## The Dunlap Boys

**A**S a result of injuries received in a railroad accident while returning from the Society Convention at Pasadena, Calif., Secretary John H. Dunlap died on July 29, 1924, in a Chicago hospital.

Mr. Dunlap was survived by Mrs. Dunlap and three children, George Spaulding, Richard Folger, and Clark Gates. Mrs. Dunlap died on April 25 last. The three boys, now aged 11½, 9½, and 8 years, respectively, are therefore orphans, and many of Mr. Dunlap's friends have expressed an interest in their welfare.

At the time Mr. Dunlap was in the hospital prior to his death, Colonel Bush, then a Vice-President of the Society, interested himself very successfully in Mr. Dunlap's financial affairs, more particularly in connection with certain insurance policies. Largely as a result of the insurance program which Mr. Dunlap had laid out, the boys are now well provided for.

They are living in Vermont with Mrs. Dunlap's brothers, under excellent home conditions. Each is provided monthly with an allowance for support and minor luxuries, and a further monthly sum is being invested by the financial guardians. Provision has also been made for the expense of their education. At the age of 21 and, again, at the age of 25 insurance maturities and bank accumulations are to be turned over to each of them.

On behalf of the Society an intimate interest has been taken in their affairs. Mr. Wilmot, the Society's Technical Editor, has been assigned the task, very pleasurable to him, of keeping in touch with the educational, family, and financial affairs of the boys. He has visited them in their homes and conferred with the In-



*Engineering structures  
whose beauty earned for  
their designers the Fowler  
Architectural Rewards.  
Upper—Beechwood Boul-  
levard Bridge; Left—San  
Pedro Lighthouse; Lower  
—Hell Gate Bridge*

insurance Com-  
pany, the Trust  
Company  
(guardian of  
the estates), the  
Surrogate and  
other officials.

Mr. Wilnot reports a general feeling of pleased surprise on the part of officials and relatives of the boys that a National organization should express such a real interest in the situation and should voluntarily assume a moral obligation to see that Mr. Dunlap's boys have every thoughtful care that he would wish them to receive.

### A Warning

**A**TENTION is directed to a form of swindle which has been imposed upon some Society members. It takes the form of a bogus offer to purchase bound copies of Society publications or of scientific periodicals and other works.

In operation, the offer is made to

purchase at a quoted price, and the member is directed to forward the material, with the promise of a check in payment by return mail. Of course, the check does not materialize, and attempts to locate the purchaser have been without avail.

If other members besides those already known, have had similar experiences and can supply the necessary evidence, it may be possible to prevent further loss. If, when the subject is broached, by correspondence, circular or otherwise, information is forwarded to the Headquarters Office, an effort will be made to make the necessary contacts and to bring the offenders to the notice of the proper officials.

At least this warning should serve to put members on guard.

## Fowler Awards

**A** FEATURE, new to Society meetings, was the presentation at Milwaukee of the Phebe Hobson Fowler Professional and Architectural Awards.

The Board, in accepting Mr. Fowler's gift in memory of his mother, established rules and procedures for the selection of the recipients of the honors and provided that the awards should be presented at the Convention—not at the Annual Meeting, as is the case with all other prizes.

On Wednesday, at the Business Meeting, following the President's Annual Address, the six honors were presented. This was the first award of these prizes and unfortunately the preliminaries were not completed sufficiently early to permit of proper announcement in the official program. The ceremony, therefore, came somewhat as a surprise to the audience.

The awards were as follows:

### PROFESSIONAL AWARD

#### FIRST HONOR

LEONARD CHASE WASON,  
M. Am. Soc. C. E.

As a Recognition of His Work as Chairman of a Committee of the Northeastern Section Which Developed the Code of Practice, Adopted by the Society.

#### SECOND HONOR

LEWIS BUCKLEY STILLWELL,  
M. Am. Soc. C. E.

For Leadership, as Chairman of Engineering Foundation, in Consolidating the Research Activities of Foundation and the Engineering Societies.

#### THIRD HONOR

CLARENCE FRANCIS BELL

In Recognition of His Executive Ability, as President of the Association of Engineers of New York, and His Achievements in Enhancing the Financial Status of the Engineering Employees of New York City.

### ARCHITECTURAL AWARD

#### FIRST HONOR

GUSTAV LINDENTHAL,  
M. Am. Soc. C. E.

For the Design of the Hell Gate Bridge, New York City.



## SECOND HONOR

JOHN DICKSON STEVENSON,  
M. Am. Soc. C. E.

For the Design of the Beechwood  
Boulevard Bridge, Pittsburgh, Pa.

## THIRD HONOR

EDWARD LOWREY WOODRUFF,  
M. Am. Soc. C. E.

For the Design of the San Pedro  
Lighthouse, California.

Pictures of the Medallions were shown in February, 1929, Proceedings, Part II, and the provisions governing the awards were detailed in the October, 1928, Proceedings, Part I.

## Going to Japan?

**A**BOUT fifty members and their families are going to Japan to attend the World Engineering Congress.

If those who expect to make this trip will notify Society Headquarters as to the details of their itinerary, the members of their parties; etc., a number of little features can be arranged which will make the journey more agreeable for all concerned.

It is particularly desired that Headquarters be promptly informed as to who are going and how, when, and from where.

## The 1930 Convention

**S**PACE does not permit of a detailed account here of the Milwaukee meeting. However, one feature, aside from the valuable technical sessions and the many very delightful social events, stands out as an innovation.

The Convention, usually the summer meeting, is provided as the time and place for the Annual Conference of Local Section Representatives. Tuesday, July 9, beginning in the afternoon, was devoted to this. In the evening there was taken up, from a new angle, the question of coming Society meetings.

Where shall the 1930 summer meeting be held, and what shall be the main topic? were the leading questions. Secondary to them were queries as to the committees that should be formed to ensure the success of the meeting and its support by all those members resident within reasonable distance of the city selected.

Tentatively, the country was divided into three regions, one the Southeast, where the spring meetings might logically be held each year; another, the West, where the summer meetings might well be held; and third, the North and Northeast, for the fall meetings. A slight departure from this routine, however, will be necessary for a time, because of arrangements already made.

No commitment had been made for the 1930 summer meeting, and the Board of Direction, wishing to place in the hands of the membership an opportunity for greater expression as to the type of meeting desired, proposed that those present at this Conference express for themselves the characteristics they would wish.

The Vice-President resident in the region, Alonzo J. Hammond, acted as Chairman of a Committee of which other members were those Directors also living in the territory: Messrs. Bell, Budd, Dufour, Eddy, Knowles, Morris, Norton, and Reichman.

While the matter was being discussed thoroughly, Cleveland came forward with a plea that won over all others. Hence the meeting next July will be held there. Topics for the general and the Division sessions were suggested, and Committees on attendance, finances, technical features, entertainment, transportation, etc., were outlined.

## Students' Breakfasts

**W**ITH no issue of Proceedings in June and July and with the May issue "on the press" at the time of the Dallas Meeting, an account of that meeting seems long delayed.

It was a very happy occasion. The meeting was well attended and the various sessions held the interest of their audiences. Ladies to the number of 106 were registered, many, of course, being from Dallas, who outdid themselves as hostesses.

The enthusiasm of the men who attended was manifest, but the ladies could not say enough for what had been done for them. They will long remember Texas and Dallas.

As usual at the Spring Meetings, a "Students' Breakfast" was held which, however, was dampened a little by a sudden and violent although brief downpour.

At these breakfasts the students are placed at round tables, set for

eight, and sprinkled generously among them are the members of the Board of Direction, leaders of the Technical Divisions, Past-Presidents, and other members prominent in Society affairs. Sometimes each one is introduced to the group and sometimes a few are permitted to "speak" for "one minute". No real speech making is attempted, and an eavesdropper strolling among the tables would hear more conversation about football than he would about secondary stresses or the doctrine of verisimilitude. There were 67 students present and "a good time was had by all".

## Another Abstract

**A**TENTION is called particularly to the abstract of the Technical Sessions of the Dallas Meeting as it appears in Part I of Proceedings, pages 1365 to 1472.

The practice of promptly abstracting the technical papers presented at meetings was inaugurated in connection with the Annual Meeting, and will be continued throughout this year as an experiment. Reports received from many directions indicate that that abstract at least was of value.

The idea is to present as promptly as possible a complete statement of the technical events, featuring more particularly the high-lights, thus permitting busy readers an opportunity to judge for themselves how much farther they wish to delve into any one or another of the subjects.

The original papers are on file in the Headquarters Office, and can be seen there, or portions can be photoprinted and forwarded, although doubtless the best method of obtaining accurate data on a feature not sufficiently elaborated, would be to communicate with the author. Certain of the papers may be reproduced in full in subsequent issues of Proceedings. The abstract, however, provides a more prompt presentation of the main features.

## August Proceedings

**T**HAT the Spring Meeting of the Society in Dallas brought out many valuable papers and discussions, will be clear to any one reading the abstracts presented in the August Proceedings. Petroleum in its various phases was one of the major

topics, but, in addition, the several Divisions represented held important sessions. A study of these digests will well repay the effort.

Of the regular papers presented, the first is on "Silt Transportation by Sacramento and California Rivers and by The Imperial Canal", from the pen of C. E. Grunsky, Past-President. The tremendous problem in the Western rivers is well described, so that this résumé of some very convincing studies should be helpful to all river engineers.

"Measuring Materials for Concrete" is treated most interestingly by William M. Venable, Member. His studies cover a wide field and deal, among other matters, with the bulking of the sand when wet, and the control of the mixing water. The practical aspects of this recital should appear reasonable to any serious student.

Several years ago, David C. Coyle, Member, presented studies on Masonry Domes. In the present paper, he takes the more complicated case entitled "Analytical Solution of Masonry Domes: Unbalanced Loads". It is hoped that the formulas based on assumptions at least roughly accurate, will be of material help in those extreme cases of loading for which previous experience avails little. Cases of partial load and of wind load are among those considered.

To the City Planner, State capitals present an unusual opportunity. This is explained by S. R. DeBoer, Esq., in his paper entitled "The Planning of Capital Cities: Denver, Colorado". He outlines some of the means which were so effective in this particular instance, in creating a delightfully beautiful capital.

Irrigation problems are vital in other countries and continents. The paper, "Government Reclamation Policy in British India", by E. S. Lindley, Member, cites the outstanding developments by British engineers in the Punjab. The system of land holding, revenues, water charges, land reclamation, and other important features are only a few of the interesting elements treated by Mr. Lindley.

Discussions to the number of 30 are also included, as well as memoirs of 9 deceased members. In addition, the size of the preliminary list, due to the accumulation during the summer months when Proceedings are not issued, is worthy of note.

## Fourteen Thousand

UNLESS forecasts fail, at exactly the date of issue of this publication, August 1st, the Society membership will touch the 14,000 mark.

The membership has doubled in the past 16 years. On June 1st, 1913, it was 7,000, and, for the next 12 years, the net increase was quite uniformly at the rate of approximately 345 per year. For the past 3½ years, the net increase has been at the average rate of 765 per year.

If the curve were plotted, a sharp change would be observed beginning about January 1st, 1926. It was in that year that the number of men admitted as Juniors changed very appreciably, and it is in this grade that perhaps eight-tenths of the increased rate occurs.

Naturally, this has resulted in a slight disturbance of the percentages of the several grades, as the following table shows.

	1913		1929	
Members	No.	%	No.	%
Associate Members	3,160	45	5,640	40
Juniors	2,830	41	6,060	43
All others	810	11	2,130	15
	200	3	170	2
	7,000	100	14,000	100

Constitutional provisions with respect to membership dues and the qualifications required for the several grades have changed somewhat in the 16 years, so that comparisons should not be based alone on either figures or percentages.

## A Problem and An Opinion

(Continued from page 1)

full compensation for this portion of the engineer's work of design, re-design, and supervision.

C.—With regard to the electric installation (in addition to the basic design and plans) the architect requested of the consultant engineer the preparation of specifications under which designs could be submitted for the lighting fixtures. The consultant engineer also supervised their installation, the architect only making the selections from fixtures submitted. The architect received 6% of the entire cost of the electric installation, paying over thereof to the consultant engineer 2%.

### THE OPINION

First.—There are points not clearly presented which should be known before definite opinions can be stated. For instance, it is not clear what function or work was performed by the Architect's Superintendent, nor

to what extent or for what work he performed the duties which should have been performed by the consultant engineer.

Second.—There was a very loose business arrangement. The agreement should have been in writing. The words, "usual basis", should not have been used. Instead, the percentage should have been definitely stated and the service defined. When a percentage was agreed upon on the foundation and frame, there should also have been an agreement on the electrical installation. When the change in height was decided upon, a supplementary agreement should have been made.

Third.—The problem as set up discloses only one side of the story and assumes, on the part of the consultant engineer, perfect fulfillment of all obligations. This may not have been the case, but the work now being completed, it is assumed. On such an assumption the following expresses a consensus of opinion as to proper fee:

A.—The re-design due to the three additional stories should be paid for on the basis of the "agreed percentage" of the cost of the foundation and frame as built, plus a reasonable surcharge for the consultant engineer's overhead and services on such work as was rendered valueless by the change. The proper charge for designing and specifying steel frame construction without mill or shop inspection and without any superintendence or supervision of construction would not be less than 2½% of the cost. Including supervision, it would be at least 3%.

If a competent inspector was placed at the job for the erection of foundations and steel work, this cost should have been paid by the client through the engineer or architect as part of the construction cost.

B.—For the foundation work, of the type described, the consultant engineer's fee should be at least 2½% or 3%, depending on the condition of the foundation work and the amount of attention and detail necessary in the design and general supervision. A fee of 1% is utterly inadequate and improper.

C.—For the electrical installation, on the assumption that the consultant engineer's work was perfectly fulfilled in all particulars, the fee of 2% of the cost was not enough. The rate of 3%, which was one-half the architect's fee, is considered low.